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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/452,930	12/02/1999	CARL E. RADZIO JR.	79189CEB	1934

1333 7590 05/02/2003

PATENT LEGAL STAFF
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EXAMINER

HECKENBERG JR, DONALD H

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 05/02/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/452,930

Applicant(s)

RADZIO ET AL.

Examiner

Donald Heckenberg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the RCE filed on April 14, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-4, and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-4, and 7-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 14, 2003 has been entered.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3-4, and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimoto et al. (U.S. Pat. No. 5,350,288; previously of record) in view of Nomura et al. (U.S. Pat. No. 5,156,754; previously of record) and Grendol (U.S. Pat. No. 4,540,534; previously of record).

Kimoto teaches an injection molding apparatus for making a molded part. Kimoto teaches the injection molding apparatus to comprise an injection molding machine for injecting resin (figure 17), the injection molding machine including a screw

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cylinder (4) having a tip, a nozzle (9) at the tip, and a thread screw (3) advancable in the screw cylinder for injecting molten resin from the nozzle. The injection molding machine further being structurally associated with a stationary portion and a movable portion forming a mold parting line (see figure 17).

Kimoto teaches a stationary cavity mold (33) and a movable core mold (34) having a first molten resin flow path (42) therebetween. A second molten resin flow path (36) is arranged proximate to the movable core mold. The second molten resin flow path is accessible to the first molten resin flow path by operation of a pressure relief valve (40) arranged for alternately blocking and unblocking molten resin flow between the first resin flow path and the second resin flow path. The pressure relief valve is located on the mold parting line proximate to the first molten flow path and the second molten resin flow path (see figure 11). The pressure relief valve operates to block molten resin flow from the first molten resin flow path to the second molten resin flow path when the molding cavity pressure is less than a predetermined level, and to release molten resin material from the first molten resin flow path to the second resin flow path when the molding cavity pressure exceeds a predetermined value (column 5, line 55 - column 6, line 5). Kimoto further teaches the pressure relief

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valve to comprise a movable pin (48) actuated by a spring bias (56).

Kimoto fails to teach the injection mold to be made from cast epoxy and thermo-set materials. Kimoto also fails to teach the relief valve to be adjustable, and the mold to comprise a pair of ejector pins arranged therein for forceably separating the movable core mold from the first molten resin flow path.

Nomura teaches the making of injection molds from cast-epoxy and thermosetting material because of the ease of which the molds may be made (column 1, lines 17-24). Nomura further teaches the injection mold to comprise ejector pins (12) for separating the molds upon completion of molding (see figure 1).

Grendol teaches an injection molding apparatus provided with a pressure relief and overflow valve (110). Like Kimoto, Grendol teaches the valve to comprise a pin (110) and a spring bias (114). Grendol further teaches the valve to comprise an adjustable stop for the purpose of setting the required molding pressure to open the valve and thereby relieve molding material and pressure from the molding cavity (see column 4, line 55 - column 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the apparatus of Kimoto as such to have made the mold from cast-

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epoxy and thermosetting material because it is known in the art that molds can easily be made from these materials as suggested by Momura. It also would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the apparatus of Kimoto to have two ejector pins because this would allow for the mold to open and the product removed from the mold as suggested by Nomura.

It further would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the apparatus of Kimoto as such to have made the pressure relief valve adjustable because this would allow for the setting of the valve become activated when certain predetermined molding pressures are reached in the molding cavity as suggested by Grendol. Note further, such a modification to the apparatus of Kimoto amounts to making a known structure (the pressure relief valve), adjustable. Generally the provision of making an apparatus adjustable, where needed, is an unpatentable advance. In re Stevens, 212 F.2d 197, 101 USPQ 284 (Cust. & Pat. App. 1954).

6. Applicant's arguments filed on April 14, 2003 have been considered, but are not persuasive.

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Applicant states that there is no teaching to arrange a pressure release valve in the first molten resin flow path in a mold that retracts from the first molten resin flow path to expose molten material to a second flow path specially to accommodate a different molten material which may produce a higher molding pressure.


Applicant's argument that the prior art does not teach the accommodation for different molten material which produces a higher molding pressure is direct to process of operating the apparatus, or, the intended use of the apparatus. It is well settled that the intended use of an apparatus is not germane to the issue of patentability of the apparatus. In re Casey, 370 F.2d 576, 580 152 USPQ 235, 238 (Cust. & Pat. App. 1967); In re Otto, 312 F.2d 937, 939, 136 USPQ 458, 459 (Cust. & Pat. App. 1963). As described above, the combination of Kimoto, Nomura, and Grendol suggest all of the apparatus elements claimed, and therefore render obvious all of the elements of the claimed apparatus.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Heckenberg whose telephone number is (703) 308-6371. The

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examiner can normally be reached on Monday through Friday from 9:30 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at (703) 308-0457. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for responses to non-final action, and 703-872-9311 for responses to final actions. The unofficial fax phone number is (703) 305-3602.


Donald Heckenberg
April 28, 2003


JAMES P. MACKEY
PRIMARY EXAMINER
4/30/03